



**Australian Government**  
**Repatriation Medical Authority**

**Statement of Principles**  
**concerning**  
**MATURE B-CELL LYMPHOID**  
**LEUKAEMIA AND SMALL LYMPHOCYTIC**  
**LYMPHOMA**  
**(Reasonable Hypothesis)**  
**(No. 78 of 2022)**

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The Repatriation Medical Authority determines the following Statement of Principles under subsection 196B(2) of the *Veterans' Entitlements Act 1986*.

Dated 23 August 2022.

The Common Seal of the  
Repatriation Medical Authority  
was affixed to this instrument  
at the direction of:

Professor Terence Campbell AM  
Chairperson

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**1 Name**

This is the Statement of Principles concerning *mature B-cell lymphoid leukaemia and small lymphocytic lymphoma (Reasonable Hypothesis)* (No. 78 of 2022).

**2 Commencement**

This instrument commences on 19 September 2022.

**3 Authority**

This instrument is made under subsection 196B(2) of the *Veterans' Entitlements Act 1986*.

**4 Repeal**

The Statement of Principles concerning chronic lymphocytic leukaemia and small lymphocytic lymphoma No. 84 of 2014 (Federal Register of Legislation No. F2014L01146) made under subsections 196B(2) and (8) of the VEA is repealed.

**5 Application**

This instrument applies to a claim to which section 120A of the VEA or section 338 of the *Military Rehabilitation and Compensation Act 2004* applies.

**6 Definitions**

The terms defined in the Schedule 1 - Dictionary have the meaning given when used in this instrument.

**7 Kind of injury, disease or death to which this Statement of Principles relates**

- (1) This Statement of Principles is about mature B-cell lymphoid leukaemia and small lymphocytic lymphoma and death from mature B-cell lymphoid leukaemia and small lymphocytic lymphoma.

*Meaning of mature B-cell lymphoid leukaemia and small lymphocytic lymphoma*

- (2) For the purposes of this Statement of Principles, mature B-cell lymphoid leukaemia and small lymphocytic lymphoma:
- (a) means a malignant neoplasm characterised by the clonal proliferation of small morphologically mature, non-functioning lymphoid cells of B-cell origin, which can present clinically as either a leukaemia or a lymphoma; and
  - (b) includes:

- (i) B-cell prolymphocytic leukaemia;
  - (ii) chronic lymphocytic leukaemia/small lymphocytic lymphoma; and
  - (iii) hairy cell leukaemia; and
- (c) excludes non-Hodgkin lymphoma other than small lymphocytic lymphoma.

Note: Small lymphocytic lymphoma and chronic lymphocytic leukaemia are tumours of the same lymphoid cell type, and are considered to be a single disease entity with two clinical presentations.

### ***Death from mature B-cell lymphoid leukaemia and small lymphocytic lymphoma***

- (3) For the purposes of this Statement of Principles, mature B-cell lymphoid leukaemia and small lymphocytic lymphoma, in relation to a person, includes death from a terminal event or condition that was contributed to by the person's mature B-cell lymphoid leukaemia and small lymphocytic lymphoma.

Note: *terminal event* is defined in the Schedule 1 – Dictionary.

## **8 Basis for determining the factors**

The Repatriation Medical Authority is of the view that there is sound medical-scientific evidence that indicates that mature B-cell lymphoid leukaemia and small lymphocytic lymphoma and death from mature B-cell lymphoid leukaemia and small lymphocytic lymphoma can be related to relevant service rendered by veterans, members of Peacekeeping Forces, or members of the Forces under the VEA, or members under the MRCA.

Note: *MRCA*, *relevant service* and *VEA* are defined in the Schedule 1 – Dictionary.

## **9 Factors that must exist**

At least one of the following factors must as a minimum exist before it can be said that a reasonable hypothesis has been raised connecting mature B-cell lymphoid leukaemia and small lymphocytic lymphoma or death from mature B-cell lymphoid leukaemia and small lymphocytic lymphoma with the circumstances of a person's relevant service:

- (1) being exposed to benzene as specified:
  - (a) for a cumulative total of at least 2,500 hours within a continuous period of 5 years before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma; and
  - (b) where the first exposure in that period occurred at least 5 years before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma;

Note: *being exposed to benzene as specified* is defined in the Schedule 1 - Dictionary

- (2) being exposed to benzene:
- (a) in an amount greater than 10 ppm-years of cumulative exposure before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma; and
  - (b) where the first exposure occurred at least 5 years before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma;

Note: *ppm-years* is defined in the Schedule 1 - Dictionary.

- (3) having chronic infection with hepatitis C virus before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma;

Note 1: In the past, hepatitis C viral infection may have been classified as non-A, non-B hepatitis.

Note 2: *chronic infection with hepatitis C virus* is defined in the Schedule 1 - Dictionary.

- (4) inhaling ethylene oxide vapour as specified:

- (a) for a cumulative total of at least 2,500 hours within a continuous period of 10 years before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma; and
- (b) where the first exposure in that period occurred at least 5 years before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma;

Note 1: Inhalation of ethylene oxide vapour can occur during the sterilisation of surgical instruments or protective clothing in hospitals.

Note 2: *Inhaling ethylene oxide vapour as specified* is defined in the Schedule 1 - Dictionary.

- (5) inhaling ethylene oxide vapour:

- (a) in an amount greater than 10 ppm-years of cumulative exposure before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma; and
- (b) where the first exposure occurred at least 5 years before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma;

Note 1: Inhalation of ethylene oxide vapour can occur during the sterilisation of surgical instruments or protective clothing in hospitals.

Note 2: *ppm-years* is defined in the Schedule 1 - Dictionary.

- (6) having received a cumulative equivalent dose of at least 0.1 sievert of ionising radiation to the bone marrow at least 5 years before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma;

Note: *cumulative equivalent dose* is defined in the Schedule 1 - Dictionary.

- (7) inhaling 1,3-butadiene gas as specified:
- (a) for a cumulative total of at least 2,500 hours within a continuous period of 10 years before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma; and
  - (b) where the first exposure in that period occurred at least 5 years before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma;

Note 1: Inhalation of 1,3-butadiene gas can occur during the distribution of petrol, manufacture of rubber and plastic products, and from breathing smoke from fires.

Note 2: *Inhaling 1,3-butadiene gas as specified* is defined in the Schedule 1 - Dictionary.

- (8) being exposed to 1,3-butadiene:
- (a) in an amount greater than 100 ppm-years of cumulative exposure before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma; and
  - (b) where the first exposure occurred at least 5 years before the clinical onset of mature B-cell lymphoid leukaemia or small lymphocytic lymphoma;

Note 1: Inhalation of 1,3-butadiene gas can occur during the distribution of petrol, manufacture of rubber and plastic products, and from breathing smoke from fires.

Note 2: *ppm-years* is defined in the Schedule 1 - Dictionary.

- (9) inability to obtain appropriate clinical management for mature B-cell lymphoid leukaemia and small lymphocytic lymphoma.

## 10 Relationship to service

- (1) The existence in a person of any factor referred to in section 9, must be related to the relevant service rendered by the person.
- (2) The factor set out in subsection 9(9) applies only to material contribution to, or aggravation of, mature B-cell lymphoid leukaemia and small lymphocytic lymphoma where the person's mature B-cell lymphoid leukaemia and small lymphocytic lymphoma was suffered or contracted before or during (but did not arise out of) the person's relevant service.

## 11 Factors referring to an injury or disease covered by another Statement of Principles

In this Statement of Principles:

- (1) if a factor referred to in section 9 applies in relation to a person; and

- (2) that factor refers to an injury or disease in respect of which a Statement of Principles has been determined under subsection 196B(2) of the VEA;

then the factors in that Statement of Principles apply in accordance with the terms of that Statement of Principles as in force from time to time.

# Schedule 1 - Dictionary

Note: See Section 6

## 1 Definitions

In this instrument:

**8-hour time-weighted average** means the averaging of different exposure levels during an average exposure period equivalent to eight hours.

**being exposed to benzene as specified** means:

- (a) having cutaneous contact with liquids containing benzene greater than 1% by volume; or
- (b) ingesting liquids containing benzene greater than 1% by volume; or
- (c) inhaling benzene vapour where such exposure occurs at an ambient 8-hour time-weighted average benzene concentration exceeding 5 parts per million.

Note: **8-hour time-weighted average** is defined in the Schedule 1 - Dictionary.

**chronic infection with hepatitis C virus** means infection with hepatitis C virus resulting in a chronic infection of at least 6 months duration, which has been confirmed by laboratory testing.

**cumulative equivalent dose** means the total dose of ionising radiation received by the particular organ or tissue from external exposure, internal exposure or both, apart from normal background radiation exposure in Australia, calculated in accordance with the methodology set out in *Guide to calculation of 'cumulative equivalent dose' for the purpose of applying ionising radiation factors contained in Statements of Principles determined under Part XIA of the Veterans' Entitlements Act 1986 (Cth)*, Australian Radiation Protection and Nuclear Safety Agency, as in force on 2 August 2017.

Note 1: Examples of circumstances that might lead to exposure to ionising radiation include being present during or subsequent to the testing or use of nuclear weapons, undergoing diagnostic or therapeutic medical procedures involving ionising radiation, and being a member of an aircrew, leading to increased levels of exposure to cosmic radiation.

Note 2: For the purpose of dose reconstruction, dose is calculated as an average over the mass of a specific tissue or organ. If a tissue is exposed to multiple sources of ionising radiation, the various dose estimates for each type of radiation must be combined.

**inhaling 1,3-butadiene gas as specified** means inhaling 1,3-butadiene at an ambient 8-hour time-weighted average concentration greater than 10 parts per million.

Note: **8-hour time-weighted average** is defined in the Schedule 1 - Dictionary.

**inhaling ethylene oxide vapour as specified** means inhaling ethylene oxide vapour at an ambient 8-hour time-weighted average concentration of at least 1.5 parts per million.

Note: **8-hour time-weighted average** is defined in the Schedule 1 - Dictionary.

**MRCAs** means the *Military Rehabilitation and Compensation Act 2004*.



***ppm-years*** means parts per million multiplied by years of exposure.

***relevant service*** means:

- (a) operational service under the VEA;
- (b) peacekeeping service under the VEA;
- (c) hazardous service under the VEA;
- (d) British nuclear test defence service under the VEA;
- (e) warlike service under the MRCA; or
- (f) non-warlike service under the MRCA.

Note: ***MRCA*** and ***VEA*** are also defined in the Schedule 1 - Dictionary.

***mature b-cell lymphoid leukaemia and small lymphocytic lymphoma***—see subsection 7(2).

***terminal event*** means the proximate or ultimate cause of death and includes the following:

- (a) pneumonia;
- (b) respiratory failure;
- (c) cardiac arrest;
- (d) circulatory failure; or
- (e) cessation of brain function.

***VEA*** means the *Veterans' Entitlements Act 1986*.